



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 10616945

TO: Elli Peselev
Art Unit: 1623
Location: REM/5A15/5C18
Serial Number: 10/616945

Thursday, May 19, 2005

From: Beverly Shears
Location: Biotech-Chem Library
REM 1A54
Phone: 571-272-2528
beverly.shears@uspto.gov

Search Notes

Scientific and Technical Information Center
SEARCH REQUEST FORM

Requester's Full Name: ELL, Peter Examiner #: 62218 Date: 5/13/05
 Art Unit: 1613 Phone Number: 2-0459 Serial Number: 10/616,945
 Location (Bldg/Room#): REM 5A15 (Mailbox #): REM 5C13 Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

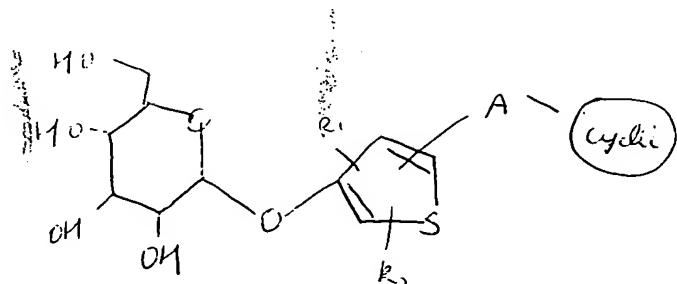
Title of Invention: ice attachment

Inventors (please provide full names): _____

Earliest Priority Date: _____

Search Topic:
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



SERIAL NUMBER 10/616,945	FILING OR 371(c) DATE 07/11/2003 RULE	CLASS 514	GROUP ART UNIT 1614	ATTORNEY DOCKET NO. 02481.1832
APPLICANTS Heiner Glombik, Hofheim, GERMANY; Wendelin Frick, Hunstetten-Beuerbach, GERMANY; Hubert Heuer, Schwabenheim, GERMANY; Werner Kramer, Mainz-Laubenheim, GERMANY; Harm Brummerhop, Frankfurt, GERMANY; Oliver Plettenburg, Hattersheim, GERMANY;				
** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** GERMANY 10231370.9-43 07/11/2002				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 11/24/2003				

STAFF USE ONLY

Searcher: Beverly e2528 Type of Search
 Searcher Phone #: _____ NA Sequence (#) _____
 Searcher Location: _____ AA Sequence (#) _____
 _____ Structure (#) _____

Vendors and cost where applicable

STN _____ Dialog _____
 Questel/Orbit _____ Lexis/Nexis _____
 Westlaw _____ WWW/Internet _____

In-house sequence systems

Peselev, E.
10/616945

10/616945

FILE 'REGISTRY' ENTERED AT 09:44:51 ON 19 MAY 2005
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STRUCTURE FILE UPDATES: 18 MAY 2005 HIGHEST RN 850688-83-4
DICTIONARY FILE UPDATES: 18 MAY 2005 HIGHEST RN 850688-83-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

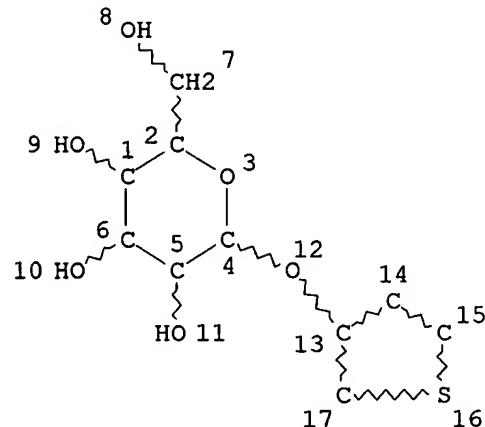
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

L1 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

Searcher : Shears 571-272-2528

STEREO ATTRIBUTES: NONE

L3 58 SEA FILE=REGISTRY SSS FUL L1

L4 58 SEA FILE=REGISTRY ABB=ON PLU=ON L3 AND NR=>3 ← At least three (3) rings present

FILE 'CAPLUS' ENTERED AT 09:44:56 ON 19 MAY 2005

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FILE COVERS 1907 - 19 May 2005 VOL 142 ISS 21

FILE LAST UPDATED: 18 May 2005 (20050518/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L5 1 L4

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:60527 CAPLUS

DOCUMENT NUMBER: 140:111628

TITLE: Synthesis and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels

INVENTOR(S): Glombik, Heiner; Frick, Wendelin; Heuer, Hubert; Kramer, Werner; Brummerhop, Harm; Plettenburg, Oliver

PATENT ASSIGNEE(S): Aventis Pharma Deutschland GmbH, Germany

SOURCE: PCT Int. Appl., 84 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

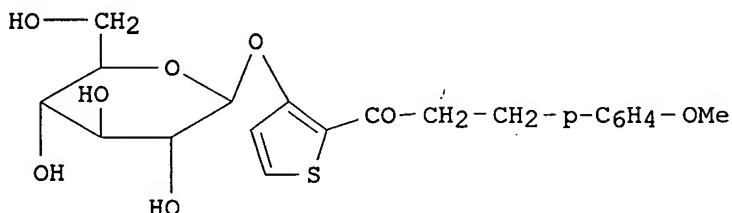
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

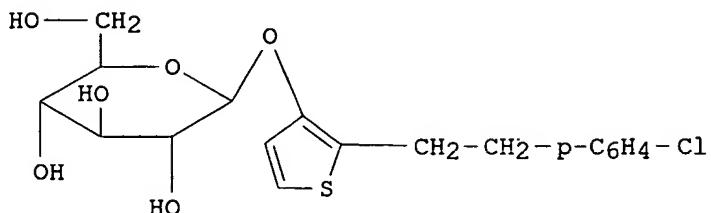
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007517	A1	20040122	WO 2003-EP6841	20030627
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG
 DE 10231370 A1 20040205 DE 2002-10231370 20020711
 CA 2493391 AA 20040122 CA 2003-2493391 20030627
 BR 2003012513 A 20050412 BR 2003-12513 20030627
 EP 1523488 A1 20050420 EP 2003-763662 20030627
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 US 2004138143 A1 20040715 US 2003-616945 20030711
 PRIORITY APPLN. INFO.: DE 2002-10231370 A 20020711
 WO 2003-EP6841 W 20030627

OTHER SOURCE(S): MARPAT 140:111628
 GI



I



II

AB Title compds., e.g. (I), and their physiol.-acceptable salts, were prepared and evaluated for use in lowering blood sugar levels and for use as anti-diabetics. Thus, 2-acetyl-3-hydroxythiophene was reacted with tetra-O-acetyl- α -D-glucopyranosyl bromide and the resulting intermediate O-deprotected to give I. Compound (II) was prepared by similar methods. In in vitro tests measuring the uptake of ¹⁴C-labeled glucose using rabbit, rat, or pig intestinal brush-border membranes, II had IC₂₅ 0.9 μ M.

IT 647834-13-7P 647834-14-8P 647834-15-9P
 647834-17-1P 647834-19-3P 647834-40-0P
 647834-48-8P 647834-49-9P 647834-50-2P
 647834-52-4P 647834-55-7P 647834-59-1P
 647834-61-5P

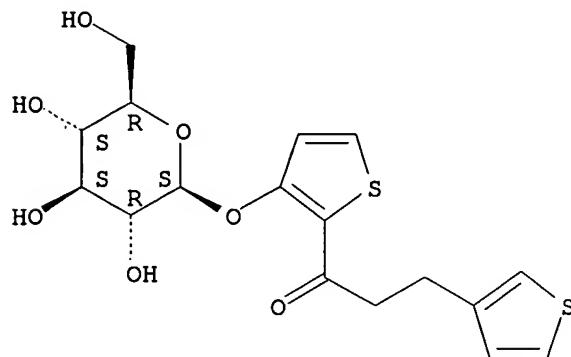
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

RN 647834-13-7 CAPLUS

CN 1-Propanone, 1-[3-(β -D-glucopyranosyloxy)-2-thienyl]-3-(3-thienyl)- (9CI) (CA INDEX NAME)

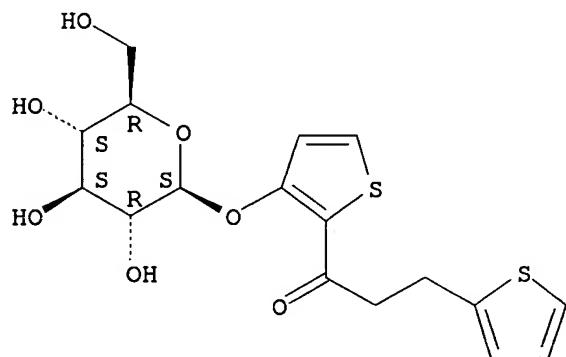
Absolute stereochemistry.



RN 647834-14-8 CAPLUS

CN 1-Propanone, 1-[3-(β -D-glucopyranosyloxy)-2-thienyl]-3-(2-thienyl)- (9CI) (CA INDEX NAME)

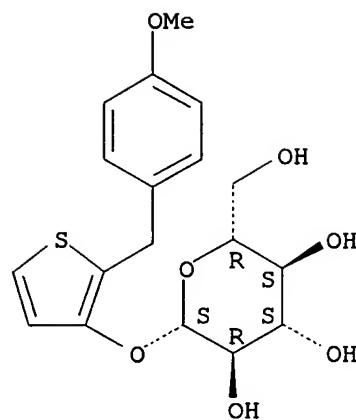
Absolute stereochemistry.



RN 647834-15-9 CAPLUS

CN β -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)

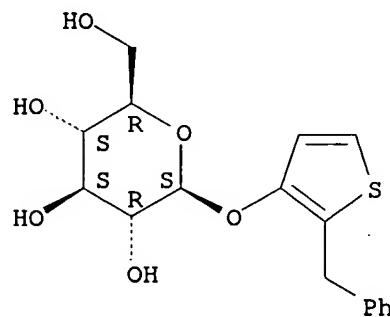
Absolute stereochemistry.



RN 647834-17-1 CAPLUS

CN β -D-Glucopyranoside, 2-(phenylmethyl)-3-thienyl (9CI) (CA INDEX NAME)

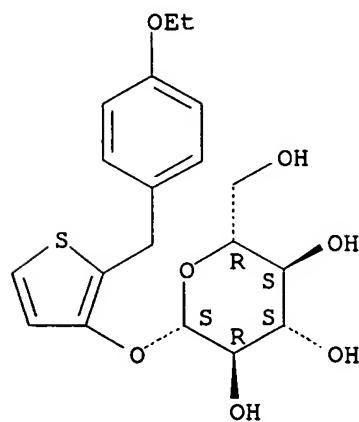
Absolute stereochemistry.



RN 647834-19-3 CAPLUS

CN β -D-Glucopyranoside, 2-[(4-ethoxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)

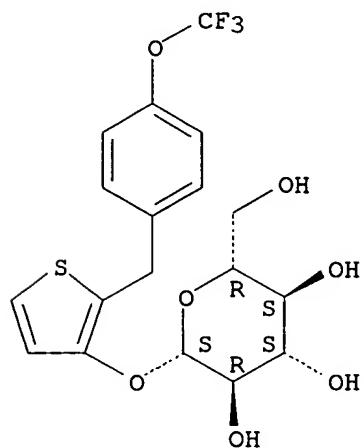
Absolute stereochemistry.



RN 647834-40-0 CAPLUS

CN β -D-Glucopyranoside, 2-[[4-(trifluoromethoxy)phenyl]methyl]-3-thienyl (9CI) (CA INDEX NAME)

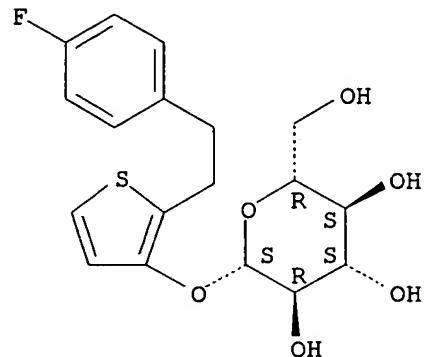
Absolute stereochemistry.



RN 647834-48-8 CAPLUS

CN β -D-Glucopyranoside, 2-[2-(4-fluorophenyl)ethyl]-3-thienyl (9CI) (CA INDEX NAME)

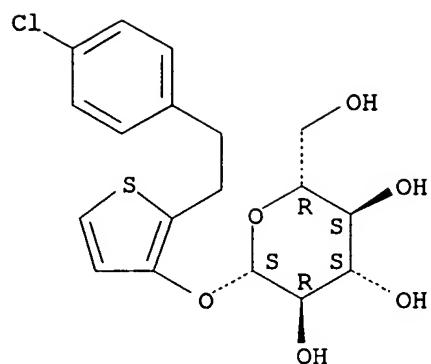
Absolute stereochemistry.



RN 647834-49-9 CAPLUS

CN β -D-Glucopyranoside, 2-[2-(4-chlorophenyl)ethyl]-3-thienyl (9CI) (CA INDEX NAME)

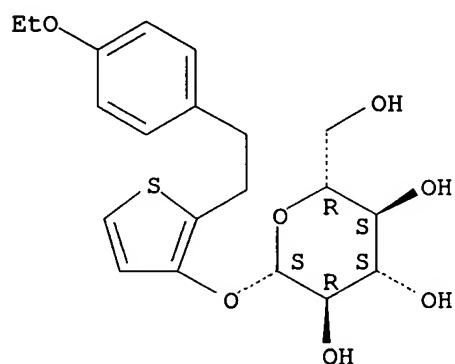
Absolute stereochemistry.



RN 647834-50-2 CAPLUS

CN β -D-Glucopyranoside, 2-[2-(4-ethoxyphenyl)ethyl]-3-thienyl (9CI)
(CA INDEX NAME)

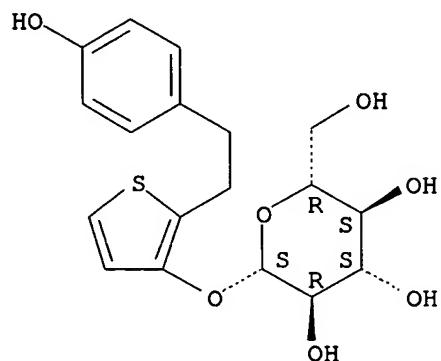
Absolute stereochemistry.



RN 647834-52-4 CAPLUS

CN β -D-Glucopyranoside, 2-[2-(4-hydroxyphenyl)ethyl]-3-thienyl (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

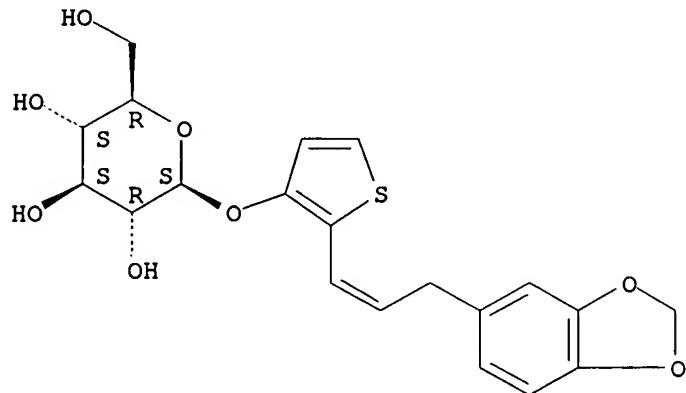


RN 647834-55-7 CAPLUS

10/616945

CN β -D-Glucopyranoside, 2-[3-(1,3-benzodioxol-5-yl)-1-propenyl]-3-thienyl (9CI) (CA INDEX NAME)

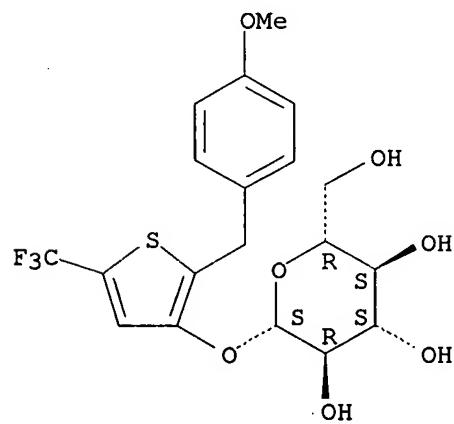
Absolute stereochemistry.
Double bond geometry unknown.



RN 647834-59-1 CAPLUS

CN β -D-Glucopyranoside, 2-[(4-methoxyphenyl)methyl]-5-(trifluoromethyl)-3-thienyl (9CI) (CA INDEX NAME)

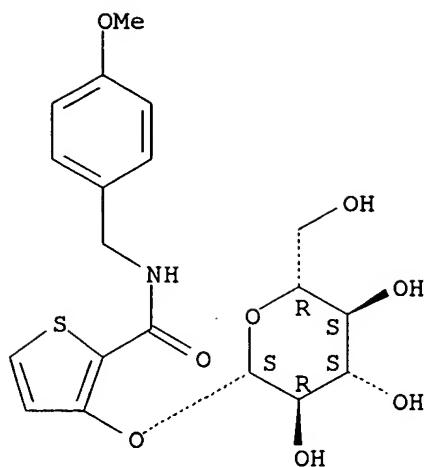
Absolute stereochemistry.



RN 647834-61-5 CAPLUS

CN 2-Thiophenecarboxamide, 3-(β -D-glucopyranosyloxy)-N-[(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 647833-67-8P

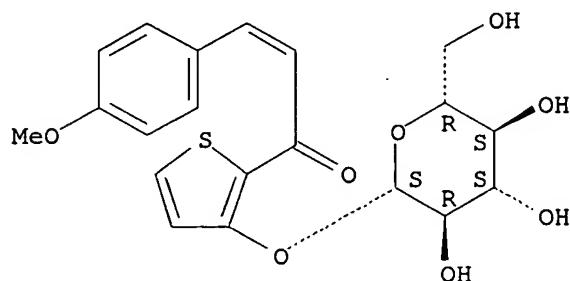
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)(preparation and therapeutic evaluation of thiophene glycosides for use
in the treatment of diabetes or for lowering blood sugar levels)

RN 647833-67-8 CAPLUS

CN 2-Propen-1-one, 1-[3-(β -D-glucopyranosyloxy)-2-thienyl]-3-(4-
methoxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

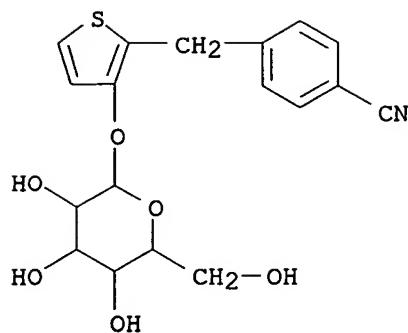


IT 647833-62-3P 647833-85-0P 647834-16-0P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or
reagent); USES (Uses)(preparation and therapeutic evaluation of thiophene glycosides for use
in the treatment of diabetes or for lowering blood sugar levels)

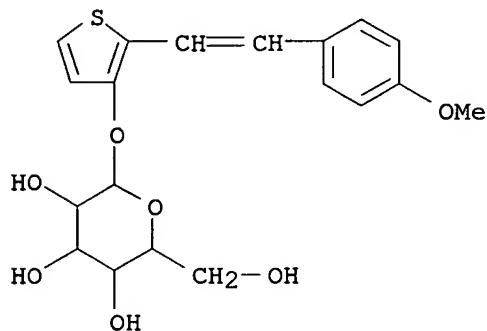
RN 647833-62-3 CAPLUS

CN Benzonitrile, 4-[[3-(hexopyranosyloxy)-2-thienyl]methyl]- (9CI) (CA
INDEX NAME)



RN 647833-85-0 CAPLUS

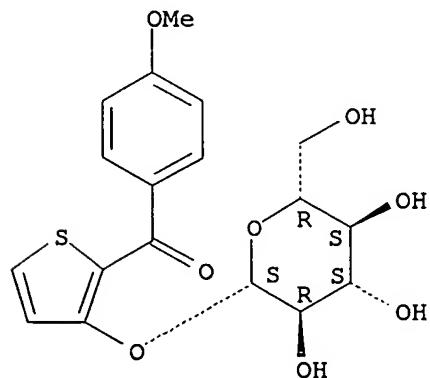
CN Hexopyranoside, 2-[2-(4-methoxyphenyl)ethenyl]-3-thienyl (9CI) (CA INDEX NAME)



RN 647834-16-0 CAPLUS

CN Methanone, [3-(β -D-glucopyranosyloxy)-2-thienyl](4-methoxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 647834-05-7P 647834-07-9P 647834-09-1P

647834-11-5P 647834-18-2P 647834-20-6P

647834-21-7P 647834-22-8P 647834-23-9P

647834-24-0P 647834-25-1P 647834-26-2P

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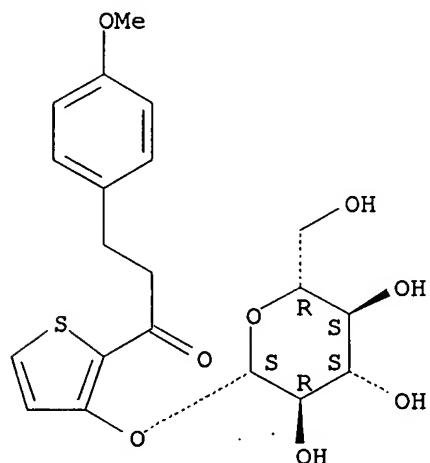
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)

(preparation and therapeutic evaluation of thiophene glycosides for use
 in the treatment of diabetes or for lowering blood sugar levels)

RN 647834-05-7 CAPLUS

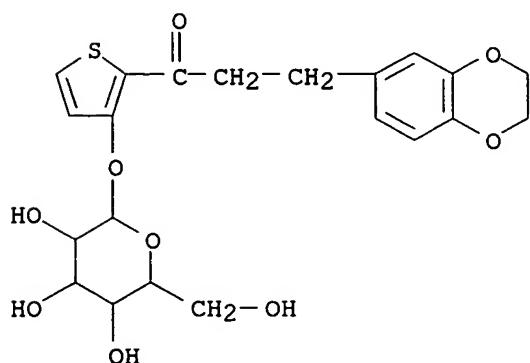
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Absolute stereochemistry.



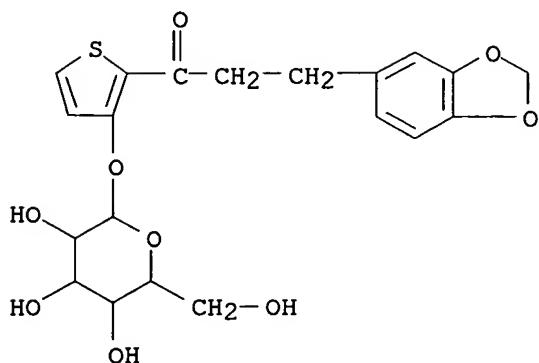
RN 647834-07-9 CAPLUS

CN 1-Propanone, 3-(2,3-dihydro-1,4-benzodioxin-6-yl)-1-[3-(hexopyranosyloxy)-2-thienyl]- (9CI) (CA INDEX NAME)



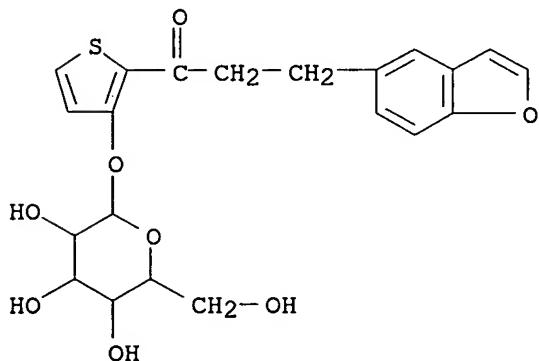
RN 647834-09-1 CAPLUS

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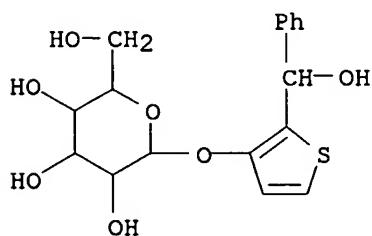
RN 647834-11-5 CAPLUS

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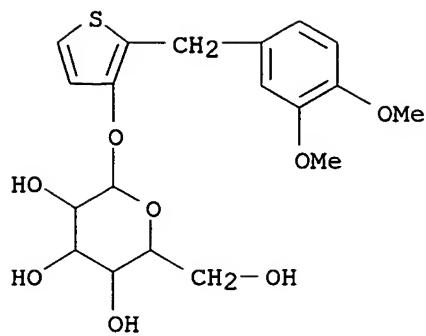
RN 647834-18-2 CAPLUS

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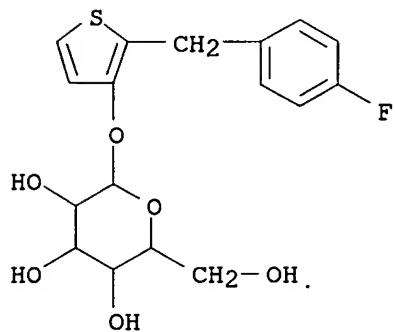


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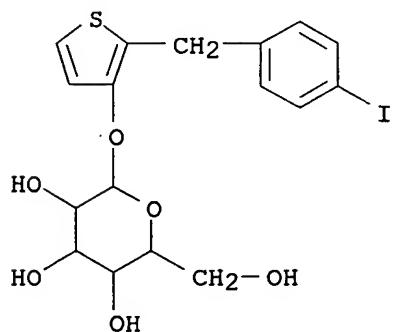
CN Hexopyranoside, 2-[(3,4-dimethoxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



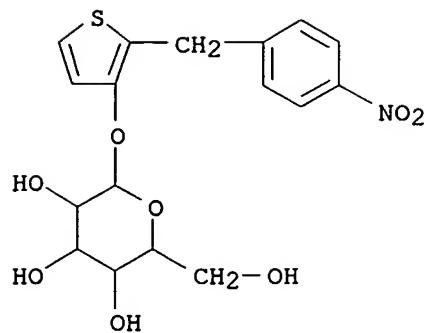
RN 647834-21-7 CAPLUS
 CN Hexopyranoside, 2-[(4-fluorophenyl)methyl]-3-thienyl (9CI) (CA INDEX
 NAME)



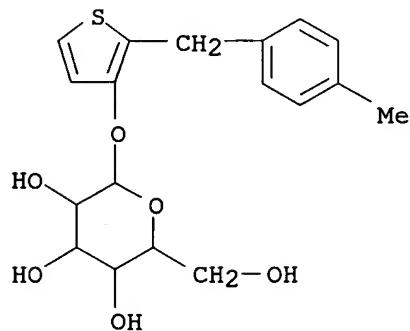
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 CN Hexopyranoside, 2-[(4-iodophenyl)methyl]-3-thienyl (9CI) (CA INDEX
 NAME)



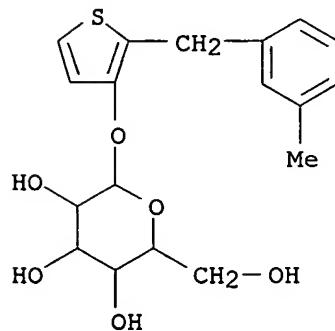
RN 647834-23-9 CAPLUS
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 NAME)



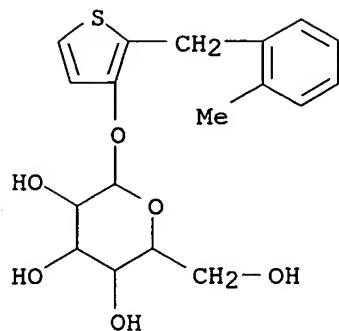
RN 647834-24-0 CAPLUS
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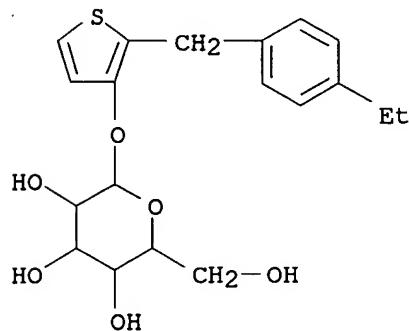
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 NAME)



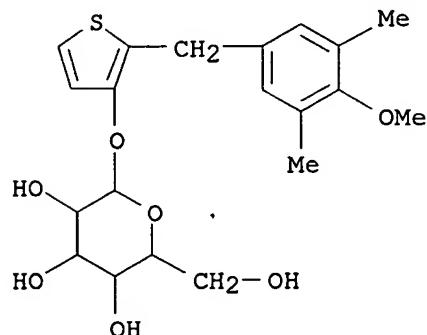
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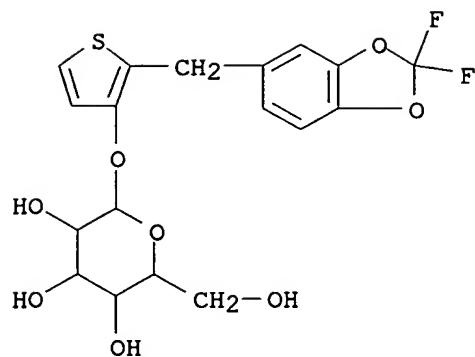
RN 647834-27-3 CAPLUS
 CN Hexopyranoside, 2-[(4-ethylphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



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 CN Hexopyranoside, 2-[(4-methoxy-3,5-dimethylphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)

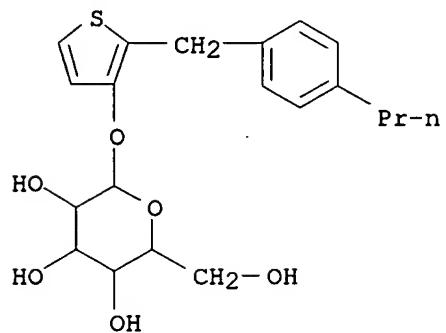


RN 647834-29-5 CAPLUS
 CN Hexopyranoside, 2-[(2,2-difluoro-1,3-benzodioxol-5-yl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



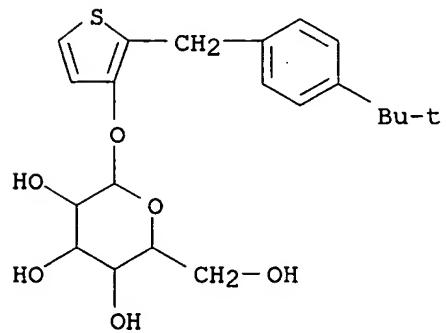
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CN Hexopyranoside, 2-[(4-propylphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



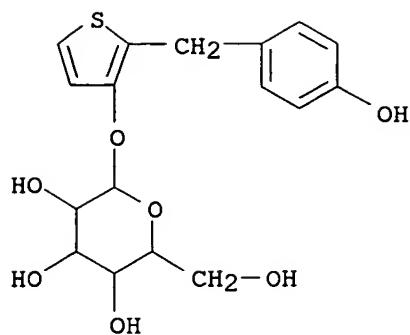
RN 647834-31-9 CAPLUS

CN Hexopyranoside, 2-[(4-(1,1-dimethylethyl)phenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)

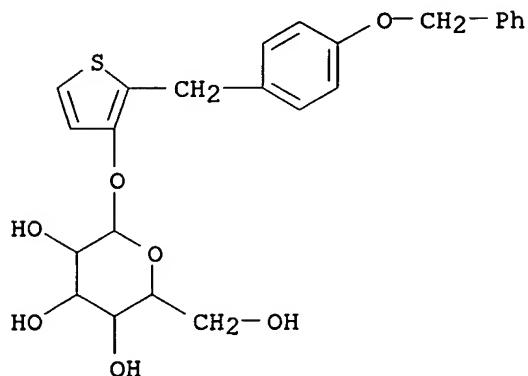


RN 647834-32-0 CAPLUS

CN Hexopyranoside, 2-[(4-hydroxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)

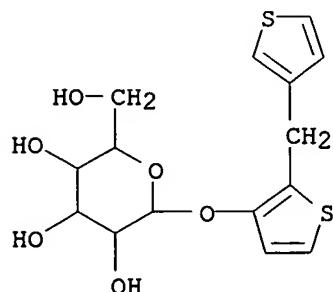


RN 647834-33-1 CAPLUS

CN Hexopyranoside, 2-[(4-(phenylmethoxy)phenyl)methyl]-3-thienyl (9CI)
(CA INDEX NAME)

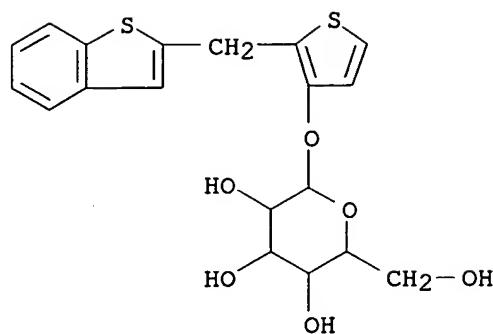
RN 647834-34-2 CAPLUS

CN Hexopyranoside, 2-(3-thienylmethyl)-3-thienyl (9CI) (CA INDEX NAME)



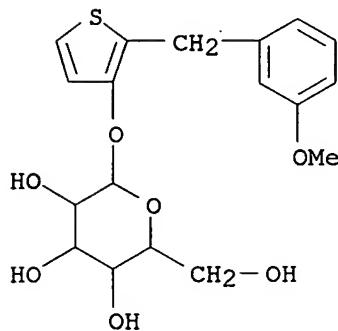
RN 647834-35-3 CAPLUS

CN Hexopyranoside, 2-(benzo[b]thien-2-ylmethyl)-3-thienyl (9CI) (CA INDEX NAME)



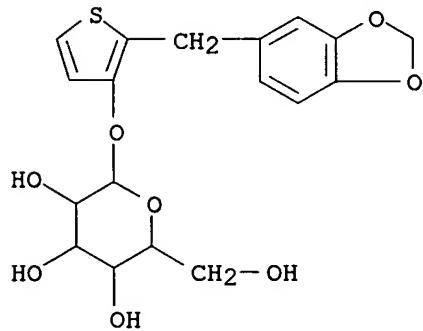
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CN Hexopyranoside, 2-[(3-methoxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



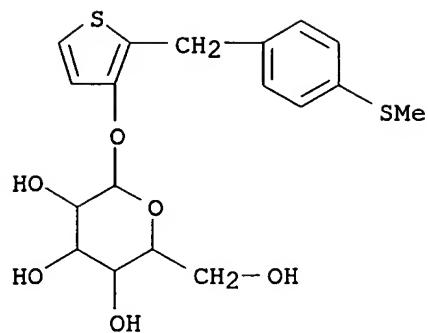
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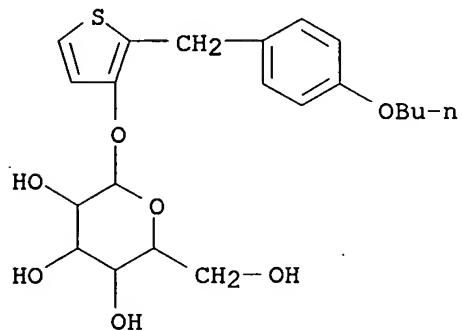
RN 647834-38-6 CAPLUS

CN Hexopyranoside, 2-[(4-(methylthio)phenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



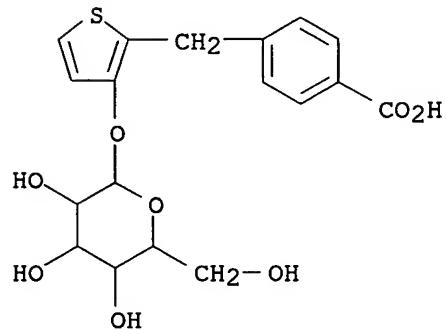
RN 647834-39-7 CAPLUS

CN Hexopyranoside, 2-[(4-butoxyphenyl)methyl]-3-thienyl (9CI) (CA INDEX NAME)



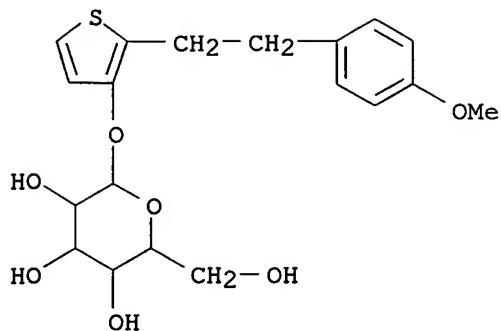
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CN Benzoic acid, 4-[[3-(hexopyranosyloxy)-2-thienyl]methyl]- (9CI) (CA INDEX NAME)

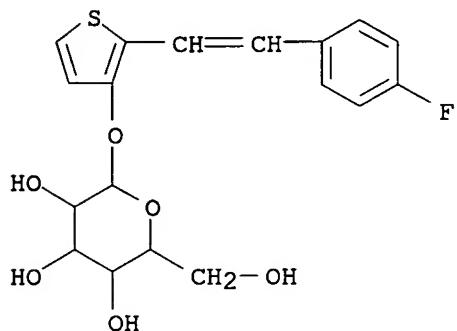


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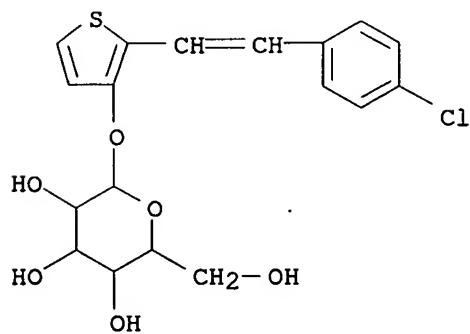
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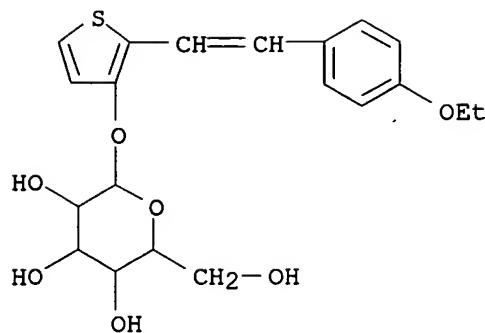
RN 647834-43-3 CAPLUS
 CN Hexopyranoside, 2-[2-(4-fluorophenyl)ethenyl]-3-thienyl (9CI) (CA
 INDEX NAME)



RN 647834-44-4 CAPLUS
 CN Hexopyranoside, 2-[2-(4-chlorophenyl)ethenyl]-3-thienyl (9CI) (CA
 INDEX NAME)

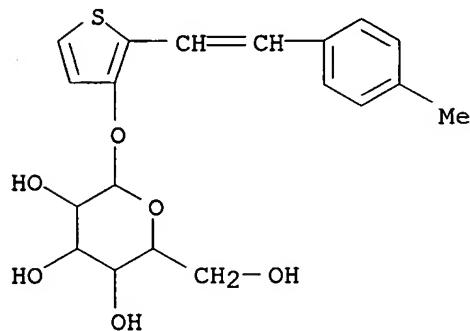


RN 647834-45-5 CAPLUS
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 INDEX NAME)



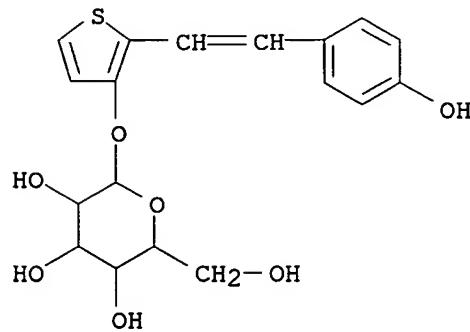
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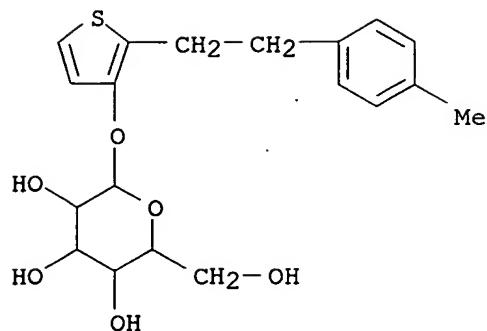
RN 647834-47-7 CAPLUS

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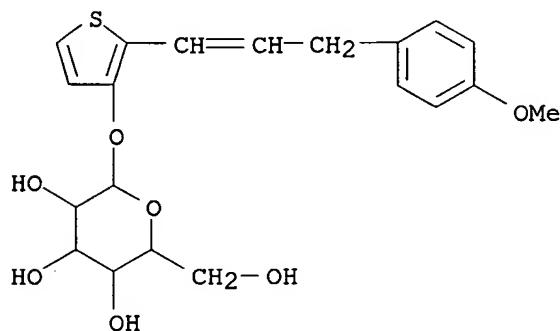


RN 647834-51-3 CAPLUS

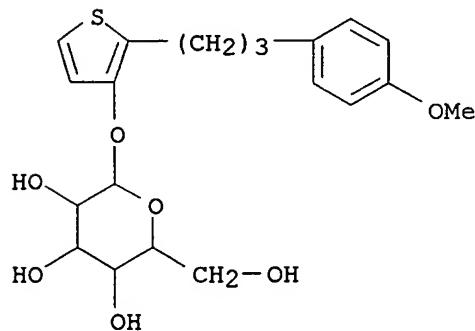
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RN 647834-53-5 CAPLUS

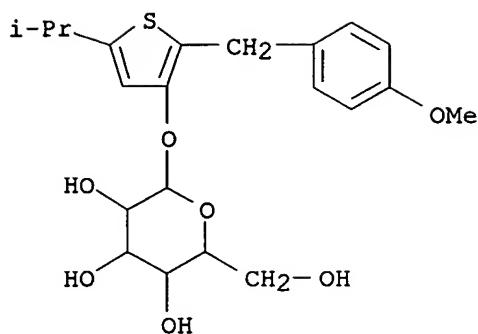
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(CA INDEX NAME)

RN 647834-54-6 CAPLUS

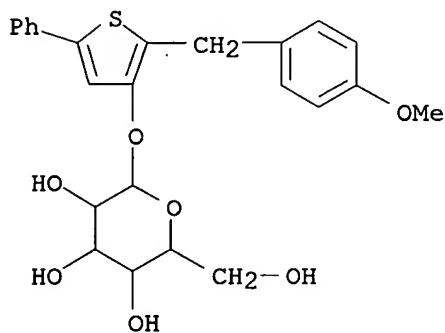
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INDEX NAME)

RN 647834-56-8 CAPLUS

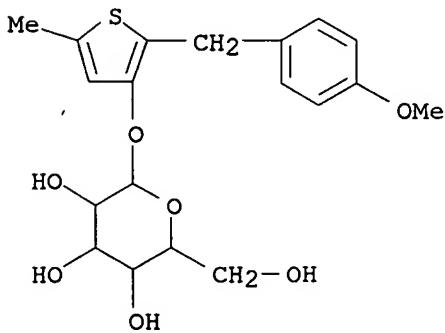
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thienyl (9CI) (CA INDEX NAME)



RN 647834-57-9 CAPLUS

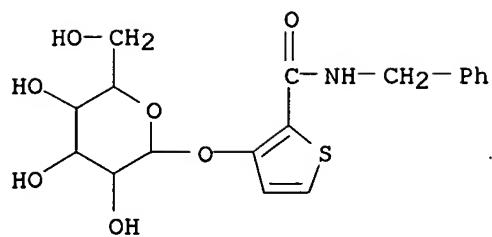
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(CA INDEX NAME)

RN 647834-58-0 CAPLUS

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(CA INDEX NAME)

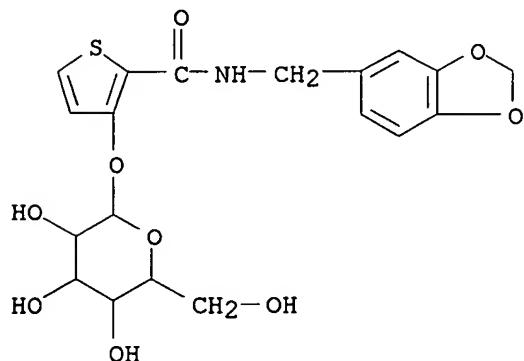
RN 647834-60-4 CAPLUS

CN 2-Thiophenecarboxamide, 3-(hexopyranosyloxy)-N-(phenylmethyl)- (9CI)
(CA INDEX NAME)



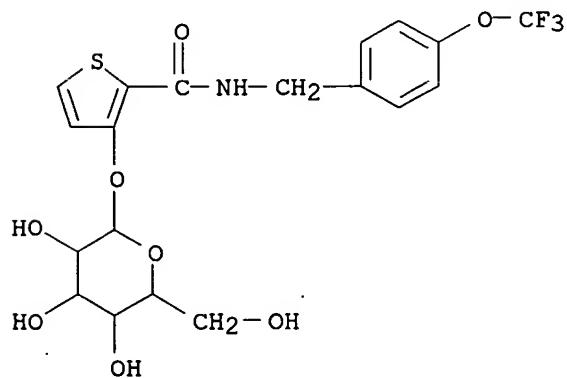
RN 647834-62-6 CAPLUS

CN 2-Thiophenecarboxamide, N-(1,3-benzodioxol-5-ylmethyl)-3-(hexopyranosyloxy)- (9CI) (CA INDEX NAME)



RN 647834-63-7 CAPLUS

CN 2-Thiophenecarboxamide, 3-(hexopyranosyloxy)-N-[(4-(trifluoromethoxy)phenyl)methyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

3

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RE FORMAT

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FILE LAST UPDATED: 01 May 1997 (19970501/UP)

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L6 0 L4

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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 17 May 2005 (20050517/PD)

FILE LAST UPDATED: 17 May 2005 (20050517/ED)

HIGHEST GRANTED PATENT NUMBER: US6895596

HIGHEST APPLICATION PUBLICATION NUMBER: US2005102725

CA INDEXING IS CURRENT THROUGH 17 May 2005 (20050517/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 17 May 2005 (20050517/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2005

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
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>>> publications, starting in 2001, for the inventions covered in <<<
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>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

L7 1 L4

L7 ANSWER 1 OF 1 USPATFULL on STN

ACCESSION NUMBER: 2004:178973 USPATFULL

TITLE: Novel thiophene glycoside derivatives, processes

10/616945

for the preparation, medicaments comprising these
compounds, and the use thereof
INVENTOR(S) : Glombik, Heiner, Hofheim, GERMANY, FEDERAL REPUBLIC
OF
Frick, Wendelin, Hunstetten-Beuerbach, GERMANY,
FEDERAL REPUBLIC OF
Heuer, Hubert, Schwabenheim, GERMANY, FEDERAL
REPUBLIC OF
Kramer, Werner, Mainz-Laubenheim, GERMANY, FEDERAL
REPUBLIC OF
Brummerhop, Harm, Frankfurt, GERMANY, FEDERAL
REPUBLIC OF
Plettenburg, Oliver, Hattersheim, GERMANY, FEDERAL
REPUBLIC OF

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004138143	A1	20040715
APPLICATION INFO.:	US 2003-616945	A1	20030711 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2002-10231370	20020711
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	ROSS J. OEHLER, AVENTIS PHARMACEUTICALS INC., ROUTE 202-206, MAIL CODE: D303A, BRIDGEWATER, NJ, 08807	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1666	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	Novel thiophene glycoside derivatives of the formula I ##STR1##	

in which the radicals have the stated meanings, and the
physiologically tolerated salts thereof and processes for their
preparation are disclosed. The compounds are suitable, for example,
as antidiabetics.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L8 0 L4

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FILE CONTENT: 1988-PRESENT (VOL 142 ISS 20) (20050513/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

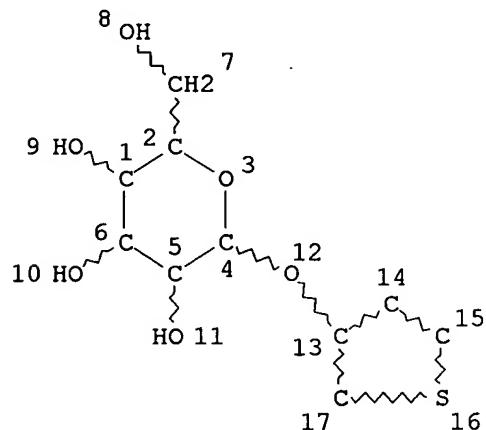
Searcher : Shears 571-272-2528

US 6861546 01 MAR 2005
 DE 10335950 24 FEB 2005
 EP 1518545 30 MAR 2005
 JP 2005051077 24 FEB 2005
 WO 2005035474 21 APR 2005

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:

ECLEVEL IS LIM ON ALL NODES
 ALL RING(S) ARE ISOLATED

L10 2 SEA FILE=MARPAT SSS FUL L1 (MODIFIED ATTRIBUTES)

100.0% PROCESSED 5026 ITERATIONS
 SEARCH TIME: 00.00.05

2 ANSWERS

L10 ANSWER 1 OF 2 MARPAT COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 141:38811 MARPAT
 TITLE: Synthesis of fluoroglycoside heterocyclic derivatives for use as antidiabetic pharmaceutical products
 INVENTOR(S): Frick, Wendelin; Glombik, Heiner; Kramer, Werner; Heuer, Hubert; Brummerhop, Harm; Plettenburg, Oliver
 PATENT ASSIGNEE(S): Aventis Pharma Deutschland GmbH, Germany
 SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

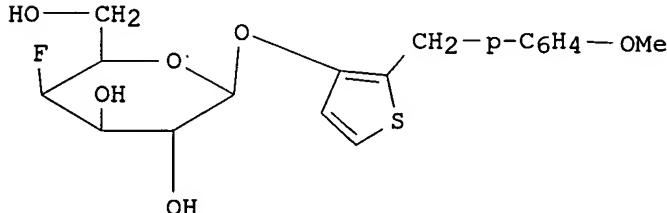
German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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WO 2004052903	A1	20040624	WO 2003-EP13455	20031128
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10258008	A1	20040708	DE 2002-10258008	20021212
US 2004259819	A1	20041223	US 2003-734573	20031212
PRIORITY APPLN. INFO.:				
DE 2002-10258008 20021212				
US 2003-466449P 20030429				
WO 2003-EP13455 20031128				

GI



AB The invention relates to substituted fluoroglycoside heterocyclic derivs., e.g. (I), to their physiol. tolerated salts, and to methods for the preparation thereof. Title compds. can be used, for example, as antidiabetic agents. Thus, 2,3,6-tri-O-acetyl-4-deoxy-4-fluoro- α -D-galactopyranosyl bromide was reacted with (3-hydroxy-2-thienyl)(4-methoxyphenyl)-methanone and the product deacetylated to give I. In in vitro tests measuring the uptake of 14C-labeled glucose using rabbit gastrointestinal brush-border membrane vesicles, I had IC50 0.3 μ M, compared with 16 μ M for Phlorizin control.

IC ICM C07H017-00
ICS C07H017-02; A61K031-70; A61P003-10

CC 33-3 (Carbohydrates)
Section cross-reference(s): 25, 27, 28, 63

ST antidiabetic heterocyclic benzene glycoside fluorinated prepn

IT Alcohols, preparation
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(fluoro; preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT Autoimmune disease
 (insulin-dependent diabetes mellitus; preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT Diabetes mellitus
 (insulin-dependent; preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT Diabetes mellitus
 (non-insulin-dependent; preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT Antidiabetic agents
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT Glycosides
 Heterocyclic compounds
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT 702638-21-9P 702638-22-0P 702638-23-1P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT 3601-36-3 7803-57-8, Hydrazine hydrate 14049-03-7,
 3-Deoxy-3-fluoro-D-glucose 15836-30-3 19488-48-3 29218-07-3,
 4-Deoxy-4-fluoro-D-glucose 40010-20-6, 4-Deoxy-4-fluoro-D-galactose
 63218-45-1 152595-64-7 202289-38-1 647833-71-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT 84065-98-5P 98807-61-5P 130818-74-5P 139200-04-7P 148123-78-8P
 461025-92-3P 701936-31-4P 701936-32-5P 701936-33-6P
 701936-34-7P 702638-17-3P 702638-18-4P 702638-19-5P
 702638-20-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

IT 702638-24-2P 702638-25-3P 702638-26-4P 702638-27-5P
 702638-28-6P 702638-29-7P 702638-30-0P 702638-31-1P
 702638-32-2P 702638-33-3P 702638-34-4P 702638-35-5P
 702638-36-6P 702638-37-7P 702638-38-8P 702638-39-9P
 702638-40-2P 702638-41-3P 702638-42-4P 702638-43-5P
 702638-44-6P 702638-45-7P 702638-46-8P 702638-47-9P
 702638-48-0P 702638-49-1P 702638-50-4P 702638-51-5P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)
 (preparation of fluoroglycoside heterocyclic derivs. for use as antidiabetic pharmaceutical products)

L10 ANSWER 2 OF 2 MARPAT COPYRIGHT 2005 ACS on STN

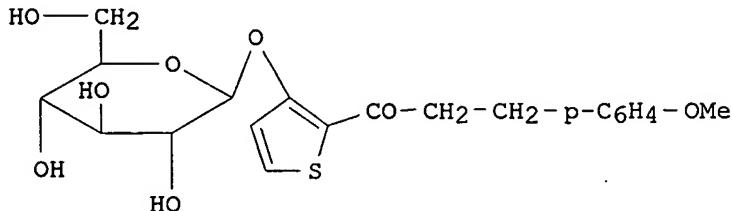
ACCESSION NUMBER: 140:111628 MARPAT

TITLE: Synthesis and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or

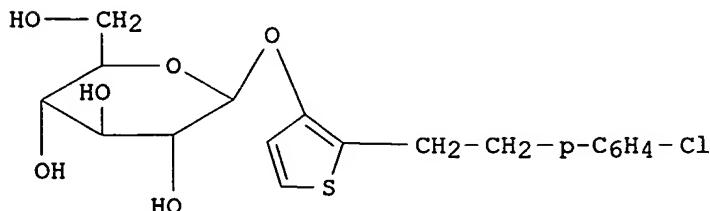
for lowering blood sugar levels
 INVENTOR(S): Glombik, Heiner; Frick, Wendelin; Heuer, Hubert;
 Kramer, Werner; Brummerhop, Harm; Plettenburg,
 Oliver
 PATENT ASSIGNEE(S): Aventis Pharma Deutschland GmbH, Germany
 SOURCE: PCT Int. Appl., 84 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007517	A1	20040122	WO 2003-EP6841	20030627
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10231370	A1	20040205	DE 2002-10231370	20020711
CA 2493391	AA	20040122	CA 2003-2493391	20030627
BR 2003012513	A	20050412	BR 2003-12513	20030627
EP 1523488	A1	20050420	EP 2003-763662	20030627
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2004138143	A1	20040715	US 2003-616945	20030711
PRIORITY APPLN. INFO.:			DE 2002-10231370	20020711
			WO 2003-EP6841	20030627

GI



I



II

AB Title compds., e.g. (I), and their physiol.-acceptable salts, were prepared and evaluated for use in lowering blood sugar levels and for use as anti-diabetics. Thus, 2-acetyl-3-hydroxythiophene was reacted with tetra-O-acetyl- α -D-glucopyranosyl bromide and the resulting intermediate O-deprotected to give I. Compound (II) was prepared by similar methods. In in vitro tests measuring the uptake of ¹⁴C-labeled glucose using rabbit, rat, or pig intestinal brush-border membranes, II had IC₂₅ 0.9 μ M.

IC ICM C07H017-00
 ICS A61K031-7042; A61P007-00

CC 33-3 (Carbohydrates)
 Section cross-reference(s): 1, 27, 63

ST thiophene glycoside prepn antidiabetic diabetes blood sugar

IT Autoimmune disease
 (insulin-dependent diabetes mellitus; preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT Diabetes mellitus
 (insulin-dependent; preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT Diabetes mellitus
 (non-insulin-dependent; preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT Antidiabetic agents
 (preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT Glycosides
 Heterocyclic compounds
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT 50-99-7, D-Glucose, biological studies
 RL: PAC (Pharmacological activity); BIOL (Biological study)
 (blood; preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT 647834-13-7P 647834-14-8P 647834-15-9P 647834-17-1P
 647834-19-3P 647834-40-0P 647834-48-8P 647834-49-9P
 647834-50-2P 647834-52-4P 647834-55-7P 647834-59-1P
 647834-61-5P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation and therapeutic evaluation of thiophene glycosides for use in the treatment of diabetes or for lowering blood sugar levels)

IT 100-07-2, 4-Methoxybenzoyl chloride 100-46-9, Benzylamine, reactions
 122-04-3, 4-Nitrobenzoyl chloride 123-11-5, 4-Methoxybenzaldehyde, reactions 572-09-8 5118-06-9 5556-07-0 6638-79-5,
 N,O-Dimethylhydroxylamine hydrochloride 13139-86-1,
 4-Methoxyphenylmagnesium bromide 17573-92-1, 3-Methoxythiophene 113589-30-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation and therapeutic evaluation of thiophene glycosides for use

in the treatment of diabetes or for lowering blood sugar levels)

IT 5118-07-0P 5118-08-1P 35134-07-7P 647833-64-5P 647833-67-8P
 647833-69-0P 647833-71-4P 647833-73-6P 647833-78-1P
 647833-80-5P 647833-82-7P 647833-87-2P 647833-89-4P
 647833-91-8P 647833-93-0P 647833-95-2P 647833-98-5P
 647834-01-3P 647834-03-5P 647834-64-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation and therapeutic evaluation of thiophene glycosides for use
 in the treatment of diabetes or for lowering blood sugar levels)

IT 647833-62-3P 647833-85-0P 647834-16-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic
 use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or
 reagent); USES (Uses)
 (preparation and therapeutic evaluation of thiophene glycosides for use
 in the treatment of diabetes or for lowering blood sugar levels)

IT 647834-05-7P 647834-07-9P 647834-09-1P 647834-11-5P
 647834-18-2P 647834-20-6P 647834-21-7P 647834-22-8P
 647834-23-9P 647834-24-0P 647834-25-1P 647834-26-2P
 647834-27-3P 647834-28-4P 647834-29-5P 647834-30-8P
 647834-31-9P 647834-32-0P 647834-33-1P 647834-34-2P
 647834-35-3P 647834-36-4P 647834-37-5P 647834-38-6P
 647834-39-7P 647834-41-1P 647834-42-2P 647834-43-3P
 647834-44-4P 647834-45-5P 647834-46-6P 647834-47-7P
 647834-51-3P 647834-53-5P 647834-54-6P 647834-56-8P
 647834-57-9P 647834-58-0P 647834-60-4P 647834-62-6P
 647834-63-7P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)
 (preparation and therapeutic evaluation of thiophene glycosides for use
 in the treatment of diabetes or for lowering blood sugar levels)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

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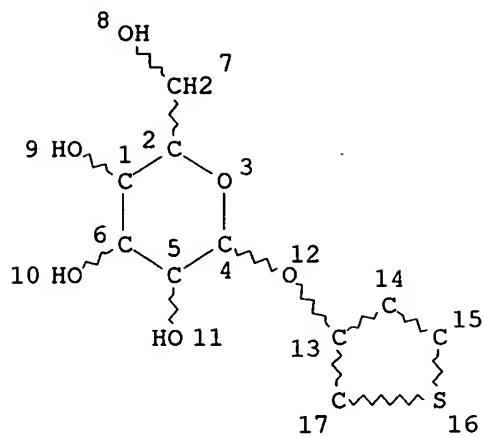
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 FILE LAST UPDATED: 18 MAY 2005 (20050518/ED)

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 (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6797117 28 SEP 2004
 DE 10322109 04 MAY 2004
 EP 1491180 29 DEC 2004
 JP 2004196848 15 JUL 2004
 WO 2005027842 31 MAR 2005

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L1 STR



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RING(S) ARE ISOLATED OR EMBEDDED

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STEREO ATTRIBUTES: NONE

ATTRIBUTES SPECIFIED AT SEARCH-TIME:

ECLEVEL IS LIM ON ALL NODES

ALL RING(S) ARE ISOLATED

L11 0 SEA FILE=MARPATPREV SSS FUL L1 (MODIFIED ATTRIBUTES)

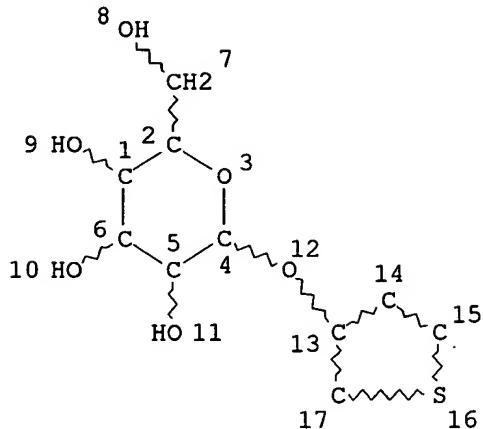
100.0% PROCESSED 11 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

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10/616945

=> d que stat 14; d his ful
L1 STR



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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L3 58 SEA FILE=REGISTRY SSS FUL L1
L4 58 SEA FILE=REGISTRY ABB=ON PLU=ON L3 AND NR=>3

(FILE 'CAPLUS' ENTERED AT 09:39:07 ON 19 MAY 2005)
DEL HIS Y

FILE 'REGISTRY' ENTERED AT 09:41:09 ON 19 MAY 2005
L1 STR
L2 1 SEA SSS SAM L1
L3 58 SEA SSS FUL L1

FILE 'CAPLUS' ENTERED AT 09:43:07 ON 19 MAY 2005
L*** DEL 1 S L3
D TI AU
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FILE 'REGISTRY' ENTERED AT 09:44:38 ON 19 MAY 2005
L4 58 SEA ABB=ON PLU=ON L3 AND NR=>3

FILE 'REGISTRY' ENTERED AT 09:44:51 ON 19 MAY 2005
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FILE 'CAPLUS' ENTERED AT 09:44:56 ON 19 MAY 2005
L5 1 SEA ABB=ON PLU=ON L4
D IBIB ABS HITSTR

FILE 'CAOLD' ENTERED AT 09:45:24 ON 19 MAY 2005
L6 0 SEA ABB=ON PLU=ON L4

FILE 'USPATFULL' ENTERED AT 09:45:28 ON 19 MAY 2005
 L7 1 SEA ABB=ON PLU=ON L4
 D IBIB ABS

FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 09:45:37 ON 19 MAY 2005
 L8 0 SEA ABB=ON PLU=ON L4

FILE 'MARPAT' ENTERED AT 09:45:42 ON 19 MAY 2005
 D L1
 L9 0 SEA SSS SAM L1 (MODIFIED ATTRIBUTES)
 L10 2 SEA SSS FUL L1 (MODIFIED ATTRIBUTES)
 D QUE STAT
 D 1-2 .BEVMAR

FILE 'MARPATPREV' ENTERED AT 09:46:38 ON 19 MAY 2005
 L11 0 SEA SSS FUL L1 (MODIFIED ATTRIBUTES)
 D QUE STAT

FILE 'HOME' ENTERED AT 09:47:02 ON 19 MAY 2005
 D QUE STAT L4

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 MAY 2005 HIGHEST RN 850688-83-4
 DICTIONARY FILE UPDATES: 18 MAY 2005 HIGHEST RN 850688-83-4

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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* The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
 * available and contains the CA role and document type information. *
 *

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

FILE CAPLUS

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FILE COVERS 1907 - 19 May 2005 VOL 142 ISS 21
FILE LAST UPDATED: 18 May 2005 (20050518/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE CAOLD
FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 17 May 2005 (20050517/PD)
FILE LAST UPDATED: 17 May 2005 (20050517/ED)
HIGHEST GRANTED PATENT NUMBER: US6895596
HIGHEST APPLICATION PUBLICATION NUMBER: US2005102725
CA INDEXING IS CURRENT THROUGH 17 May 2005 (20050517/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 17 May 2005 (20050517/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2005

>>> USPAT2 is now available. USPATFULL contains full text of the original, i.e., the earliest published granted patents or applications. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. A USPATFULL record contains not only the original published document but also a list of any subsequent publications. The publication number, patent kind code, and publication date for all the US publications for an invention are displayed in the PI (Patent Information) field of USPATFULL records and may be searched in standard search fields, e.g., /PN, /PK, etc.

>>> USPATFULL and USPAT2 can be accessed and searched together through the new cluster USPATALL. Type FILE USPATALL to enter this cluster.

>>> Use USPATALL when searching terms such as patent assignees, classifications, or claims, that may potentially change from

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>>> the earliest to the latest publication.

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FILE MEDLINE

FILE LAST UPDATED: 18 MAY 2005 (20050518/UP). FILE COVERS 1950 TO DA

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>

http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950:

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

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FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 18 May 2005 (20050518/ED)

FILE RELOADED: 19 October 2003.

FILE EMBASE

FILE COVERS 1974 TO 12 May 2005 (20050512/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

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FILE MARPAT

FILE CONTENT: 1988-PRESENT (VOL 142 ISS 20) (20050513/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6861546 01 MAR 2005
DE 10335950 24 FEB 2005
EP 1518545 30 MAR 2005
JP 2005051077 24 FEB 2005
WO 2005035474 21 APR 2005

Structure search limits have been raised. See HELP SLIMIT for the new higher limits.

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FILE MARPATPREV

Searcher : Shears 571-272-2528

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